HARSHIT SOHANEY

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EXPERIENCE

Back-End Software Engineer Co-op | Mozilla Corp. May 2023 - Present

- Implemented the spec for **Storage Access API** in collaboration with Mozilla, Google and Apple, by upgrading storage access from per page to per frame
- Improved Firefox privacy features including fingerprinting, total cookie protection and security as a member of the **Anti-tracking web-platform** team
- Redesigned the clear browsing data process that improved user's experience over controlling their privacy settings

Application Developer Co-op | Softchoice Corp. May 2022 – Aug 2022

- Improved the front-end and back-end for **Single Page Applications (SPA)** on Softchoice's portal using **.NET Core** to help users navigate items efficiently
- Optimized API logging tables with **Object Relational Mapping (ORM)** using **LINQ to SQL** queries and improved access time from 30 seconds to 2 seconds
- Implemented a planning interface by creating APIs to assist in determining development time and creating tasks

PROJECT HIGHLIGHTS

Syllabyte | Personal Project/Founder May 2023 - Present

- Led a team of 5 to develop a studying application to help students with ADHD tackle **time dysmorphia** and **decision paralysis** during the school year
- Developed an **API** architecture using **Django** and created a heuristics-based **recommendation algorithm** that sorts course tasks in order of importance
- Researched about an AI based **PDF scanning** feature to automate task inputting which is predicted to save users **2-4 hours** in to-do list maintenance

Moodlist | Deep Learning Project Oct 2022 - Jan 2023

- Designed and trained a mood classifier based on a user's music history to personalize recommendations using **PyTorch, NumPy**, and the **Spotify API**
- Improved the pipeline of **Feature Engineering** by developing a data cleaning workflow to process a 1 million item dataset with over 5 gigabytes of data
- Engineered a **Recurrent Neural Network (RNN)** architecture with an accuracy of 75% in predicting a user's mood

GIS Mapping System | University of Toronto ECE297 Jan 2022 - May 2022

- Developed a **navigation system** using OpenStreetMap with C++ to improve movement speed by **98%**
- Applied algorithms such as **Breadth First Search, Dijkstra**, and **A*** to optimize path-finding and included features such as directions, subways and search bar
- Employed heuristic algorithms such as **2-opt** and **Simulated Annealing** with techniques like **multi-threading** to find an optimum solution to the Travelling Salesman Problem

ACHIEVEMENTS

- **Second Place Prize** winner against 200+ participants at NewHacks 2022
- **Second Place Prize** winner against 20 teams at ENACTUS UofT Innovation Pitch Competition for a social venture

EDUCATION

Bachelor of Applied Science
in Computer Engineering

University of Toronto

Sept 2020 – May 2025

Minor in Artificial Intelligence
Dean's Honor List 2020 - 2023

Courses

Data Structures & Algorithms, Operating Systems, Intro to Deep Learning, Probability & Statistics, Ethics of AI, Computer Networks

Clubs & Positions

UofT AI - Director of ProjectX, **UofTHacks** - Web-dev executive *uofthacks.com*, **Learn AI** - Curriculum Content Lead, **ECE Club** - Events Director, **UofT Aerospace Design Team** - Firmware & Optics, Musician

TECHNICAL SKILLS

Programming

Software
C/C++ | Python | C# | Git | MySQL | PostgresSQL

Web
JavaScript | AngularJS | jQuery | React | Django

Skills
Agile Development | SCRUM | Software Communication | Engineering Design

Machine Learning

PyTorch | Numpy | TensorFlow | NLTK | Matplotlib | Pandas

Software and Frameworks

OOP | .NET Development | MVC Architecture | LINQ | GCP